

WEST Search History

DATE: Tuesday, June 03, 2003

Set Name Query
side by side

Hit Count Set Name
result set

DB=PGPB,JPAB,EPAB,DWPI,TDBD; THES=ASSIGNEE; PLUR=YES;
OP=OR

L33 (search\$ with catalog\$) and ((display\$ or review\$) with log\$) and ((sav\$ or stor\$ or record\$) with quer\$) and @pd<=20000630 0 L33

L32 (search\$ with quer\$) and (search\$ with catalog\$) and ((display\$ or review\$) with log\$) and ((sav\$ or stor\$ or record\$) with quer\$) and @pd<=20000630 0 L32

DB=USPT; THES=ASSIGNEE; PLUR=YES; OP=OR

L31 L30 and bezos 2 L31

L30 L28 and ((705/26 |705/27)!.CCLS.) 9 L30

L29 L28 and l3 1 L29

L28 "amazon.com" and (select\$ with purchas\$) and quantit\$ 14 L28

L27 6304864.pn. and ((display\$ or review\$) with log\$) 1 L27

L26 l22 not L25 2 L26

L25 L21 and l18 2 L25

L24 L21 and l20 0 L24

L23 L21 and l17 3 L23

L22 L21 and l16 4 L22

L21 ((display\$ or review\$) with log\$) and l13 65 L21

L20 L19 and ((history or past or profile) with quer\$) 1 L20

L19 L18 and ((identical\$ or similar or "same") near2 quer\$) 3 L19

L18 6269361.pn. or 5634051.pn. or 6460034.pn. 3 L18

L17 L16 and l10 4 L17

L16 L14 and ((identical\$ or similar or "same") near2 quer\$) 7 L16

L15 L14 and ((identical\$ or similar or "same") near3 quer\$) 9 L15

L14 L13 and l3 18 L14

L13 ((identical\$ or similar or "same") with quer\$) and l6 380 L13

L12 L11 and ((brows\$ or surf\$) with catalog\$) 1 L12

L11 L10 and l7 10 L11

L10 (707/5)!.CCLS. or 707/10,2,4.ccls. 1006 L10

L9 L8 and ((705/26 |705/27)!.CCLS.) 0 L9

L8 L7 and l2 0 L8

L7 L6 and l3 26 L7

L6	((prompt\$ or select\$ or determin\$ or choos\$) with catalog\$) and @ad<=20000630	11088	L6
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L4	L3 and l2	1	L4
L3	(search\$ with quer\$) and (searc\$ with catalog\$) and ((sav\$ or stor\$ or record\$) with quer\$) and @ad<=20000630	118	L3
L2	L1 and @ad<=20000630	5	L2
L1	6356905.pn. or 6484162.pn. or 6169986.pn. 6332146.pn. or 6321231.pn. or 6295513.pn.	6	L1

END OF SEARCH HISTORY



Generate Collection

Print

L19: Entry 1 of 3

File: USPT

Oct 1, 2002

US-PAT-NO: 6460034

DOCUMENT-IDENTIFIER: US 6460034 B1

TITLE: Document knowledge base research and retrieval system

DATE-ISSUED: October 1, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Wical; Kelly	San Carlos	CA		

ASSIGNEE-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY	TYPE CODE
Oracle Corporation	Redwood Shores	CA			02

APPL-NO: 08/ 861961 [PALM]

DATE FILED: May 21, 1997

INT-CL: [07] G06 F 17/30

US-CL-ISSUED: 707/5

US-CL-CURRENT: 707/5

FIELD-OF-SEARCH: 707/1-5

PRIOR-ART-DISCLOSED:

U.S. PATENT DOCUMENTS

Search Selected

Search ALL

	PAT-NO	ISSUE DATE	PATENTEE-NAME	US-CL
<input type="checkbox"/>	5159667	October 1992	Borrey et al.	395/148
<input type="checkbox"/>	5167011	November 1992	Priest	395/54
<input type="checkbox"/>	5257185	October 1993	Farley et al.	364/419.19
<input type="checkbox"/>	5276616	January 1994	Kuga et al.	364/419.08
<input type="checkbox"/>	5325298	June 1994	Gallant	364/419.19
<input type="checkbox"/>	5369763	November 1994	Biles	395/600
<input type="checkbox"/>	5418948	May 1995	Turtle	707/4
<input type="checkbox"/>	5418961	May 1995	Segal et al.	707/1
<input type="checkbox"/>	5442780	August 1995	Takanashi et al.	395/600
<input type="checkbox"/>	5488725	January 1996	Turtle et al.	707/5
<input type="checkbox"/>	5544049	August 1996	Henderson et al.	704/7
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<input type="checkbox"/>	5630125	May 1997	Zellweger	395/614
<input type="checkbox"/>	5634051	May 1997	Thomson	707/5
<input type="checkbox"/>	5642502	June 1997	Driscoll	707/5
<input type="checkbox"/>	5675819	October 1997	Schuetze	704/10
<input type="checkbox"/>	5708829	January 1998	Kadashevich et al.	707/5
<input type="checkbox"/>	5717914	February 1998	Husick et al.	707/5
<input type="checkbox"/>	5721902	February 1998	Schultz	707/4
<input type="checkbox"/>	5724567	March 1998	Rose et al.	707/2
<input type="checkbox"/>	5761418	June 1998	Francis et al.	395/200.31
<input type="checkbox"/>	5768578	June 1998	Kirk et al.	707/100
<input type="checkbox"/>	5787234	July 1998	Molloy	706/46
<input type="checkbox"/>	5787417	July 1998	Hargrove	707/4
<input type="checkbox"/>	5819258	October 1998	Vaithyanathan et al.	707/2
<input type="checkbox"/>	5842206	November 1998	Sotomayor	707/5
<input type="checkbox"/>	5875446	February 1999	Brown et al.	707/3
<input type="checkbox"/>	5956708	September 1999	Dyko et al.	707/3
<input type="checkbox"/>	5963940	October 1999	Liddy et al.	707/5
<input type="checkbox"/>	5978799	November 1999	Hirsch	707/4
<input type="checkbox"/>	6006221	December 1999	Liddy et al.	707/5
<input type="checkbox"/>	6026388	February 2000	Liddy et al.	707/1

OTHER PUBLICATIONS

Liddy, Elizabeth D. et al., "DR-LINK System: Phase I Summary" Proceedings of the

TIPSTER, Syracuse Univ., NY, Sep. 1993, pp. 93-110, 1994.*
Liddy, Elizabeth D. et al., "DR-LINK: A System Update for TREC-2," TREC Text Retrieval Conf, NIST, Wash., D.C., Aug. 1993, pp. 85-99.*
S. Al-Hawamdeh, "Compound Document Processing," Proc. of the 15.sup.th Annual Internat'l Computer Software & Applications Conf., Sep. 1991, p. 640-4.*
Cox, John "'Text-Analysis' Server to Simplify Queries", Communications Week, Apr. 19, 1993.

ART-UNIT: 2171

PRIMARY-EXAMINER: Von Buhr; Maria N.

ATTY-AGENT-FIRM: Stattler Johansen & Adeli LLP

ABSTRACT:

A knowledge base search and retrieval system, which includes factual knowledge base queries and concept knowledge base queries, is disclosed. A knowledge base stores associations among terminology/categories that have a lexical, semantical or usage association. Document theme vectors identify the content of documents through themes as well as through classification of the documents in categories that reflects what the documents are primarily about. The factual knowledge base queries identify, in response to an input query, documents relevant to the input query through expansion of the query terms as well as through expansion of themes. The concept knowledge base query does not identify specific documents in response to a query, but specifies terminology that identifies the potential existence of documents in a particular area.

25 Claims, 22 Drawing figures



Generate Collection

Print

L19: Entry 1 of 3

File: USPT

Oct 1, 2002

DOCUMENT-IDENTIFIER: US 6460034 B1

TITLE: Document knowledge base research and retrieval system

US Patent No. (1):
6460034

Brief Summary Text (7):

The terminology used in a query reflects each individual user's view of the topic for which information is sought. Thus, different users may select different query terms to search for the same information. For example, to locate information about financial securities, a first user may compose the query "stocks and bonds", and a second user may compose the query "equity and debt." For these two different queries, a word match based search and retrieval system would identify two different sets of documents (i.e., the first query would return all documents that have the words stocks and bonds and the second query would return all documents that contain the words equity and debt). Although both of these query terms seek to locate the same information, with a word search and retrieval system, different terms in the query generate different responses. Thus, the contents of the query, and subsequently the response from word based search and retrieval systems, is highly dependent upon how the user expresses the query term. Consequently, it is desirable to construct a search and retrieval system that is not highly dependent upon the exact words chosen for the query, but one that generates a similar response for different queries that have similar meanings.

Detailed Description Text (108):

The profile query utilizes some of the same processes used in the factual and concept knowledge base queries discussed above. In general, the profile query process involves determining documents that include information on the subject. In one embodiment, the subjects are processed by the query term processing 205. The functions performed in the query term processing 205, are described fully above. The subject, or subjects, output from the query term processing 205 are used to search all accessible documents. For each document identified, a corresponding topic or category is determined through the document theme vector 160 (Table 1). In one embodiment, the topics correspond to nodes in the knowledge base.

End of Result Set



Generate Collection

Print

L31: Entry 2 of 2

File: USPT

Sep 28, 1999

US-PAT-NO: 5960411

DOCUMENT-IDENTIFIER: US 5960411 A

TITLE: Method and system for placing a purchase order via a communications network

DATE-ISSUED: September 28, 1999

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Hartman; Peri	Seattle	WA		
Bezos; Jeffrey P.	Seattle	WA		
Kaphan; Shel	Seattle	WA		
Spiegel; Joel	Seattle	WA		

ASSIGNEE-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY	TYPE CODE
Amazon.com, Inc.	Seattle	WA			02

APPL-NO: 08/ 928951 [PALM]

DATE FILED: September 12, 1997

INT-CL: [06] G06 E 17/60

US-CL-ISSUED: 705/26; 705/27, 345/962

US-CL-CURRENT: 705/26; 345/962, 705/27

FIELD-OF-SEARCH: 705/26, 705/27, 380/24, 380/25, 235/2, 235/375, 235/378, 235/381, 395/188.01, 345/962

PRIOR-ART-DISCLOSED:

U.S. PATENT DOCUMENTS

Search Selected

Search ALL

	PAT-NO	ISSUE-DATE	PATENTEE-NAME	US-CL
<input type="checkbox"/>	4937863	June 1990	Robert et al.	380/4
<input type="checkbox"/>	5204897	April 1993	Wyman	380/4
<input type="checkbox"/>	5260999	November 1993	Wyman	384/4
<input type="checkbox"/>	5627940	May 1997	Rohra et al.	395/12
<input type="checkbox"/>	5640501	June 1997	Turpin	395/768
<input type="checkbox"/>	5640577	June 1997	Scharmer	395/768
<input type="checkbox"/>	5664111	September 1997	Nahan et al.	705/27
<input type="checkbox"/>	5715314	February 1998	Payne et al.	380/24
<input type="checkbox"/>	5715399	February 1998	Bezos	705/27
<input type="checkbox"/>	5727163	March 1998	Bezos	705/27
<input type="checkbox"/>	5745681	April 1998	Levine et al.	395/200.3
<input type="checkbox"/>	5758126	May 1998	Daniels et al.	395/500

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FOREIGN-PAT-NO	PUBN-DATE	COUNTRY	US-CL
0855687 A2	January 1998	EP	
0855659 A1	January 1998	EP	
0845747A2	June 1998	EP	
0883076A2	December 1998	EP	
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WO 96/38799	December 1996	WO	
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Jones, Chris. "Java Shopping Cart and Java Wallet; Oracles plans to join e-commerce initiative." Mar. 31, 1997, InfoWorld Media Group.

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<http://www.elibrary.com/id/101/101/getdoc...docid=1007497@library.sub.--a&dtype=0.about.0&dinst=0>. [Accessed Nov. 19, 1998].

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"Sax Software Announces Sax NetSell; Sax NetSell's design-time ActiveX controls make Internet commerce easy." 1997, Sax Software Corp.

Baron, Chris and Bob Weil, "Implementing a Web Shopping Cart," Dr. Dobb's Journal, Sep. 1996, pp. 64, 66, 68-69, and 83-85.

Hoque, Reaz, "A Shopping Cart Application with JavaScript," Web Techniques, May 1998, pp. 63, 65-66, and 68.

ART-UNIT: 274

PRIMARY-EXAMINER: Trammell; James P.

ASSISTANT-EXAMINER: Smith; Demetra R.

ATTY-AGENT-FIRM: Perkins Coie LLP

ABSTRACT:

A method and system for placing an order to purchase an item via the Internet. The order is placed by a purchaser at a client system and received by a server system. The server system receives purchaser information including identification of the purchaser, payment information, and shipment information from the client system. The server system then assigns a client identifier to the client system and associates the assigned client identifier with the received purchaser information. The server system sends to the client system the assigned client identifier and an HTML document identifying the item and including an order button. The client system receives and stores the assigned client identifier and receives and displays the HTML document. In response to the selection of the order button, the client system sends to the server system a request to purchase the identified item. The server system receives the request and combines the purchaser information associated with the client identifier of the client system to generate an order to purchase the item in accordance with the billing and shipment information whereby the purchaser effects the ordering of the product by selection of the order button.

26 Claims, 12 Drawing figures

End of Result Set



Generate Collection

Print

L31: Entry 2 of 2

File: USPT

Sep 28, 1999

DOCUMENT-IDENTIFIER: US 5960411 A

TITLE: Method and system for placing a purchase order via a communications network

Abstract Text (1):

A method and system for placing an order to purchase an item via the Internet. The order is placed by a purchaser at a client system and received by a server system. The server system receives purchaser information including identification of the purchaser, payment information, and shipment information from the client system. The server system then assigns a client identifier to the client system and associates the assigned client identifier with the received purchaser information. The server system sends to the client system the assigned client identifier and an HTML document identifying the item and including an order button. The client system receives and stores the assigned client identifier and receives and displays the HTML document. In response to the selection of the order button, the client system sends to the server system a request to purchase the identified item. The server system receives the request and combines the purchaser information associated with the client identifier of the client system to generate an order to purchase the item in accordance with the billing and shipment information whereby the purchaser effects the ordering of the product by selection of the order button.

INVENTOR (2):

Bezos; Jeffrey P.

Inventor Group (2):

Bezos; Jeffrey P. Seattle WA

Assignee Name (1):

Amazon.com, Inc.

Assignee Group (1):

Amazon.com, Inc. Seattle WA 02

Brief Summary Text (6):

The World Wide Web is especially conducive to conducting electronic commerce. Many Web servers have been developed through which vendors can advertise and sell product. The products can include items (e.g., music) that are delivered electronically to the purchaser over the Internet and items (e.g., books) that are delivered through conventional distribution channels (e.g., a common carrier). A server computer system may provide an electronic version of a catalog that lists the items that are available. A user, who is a potential purchaser, may browse through the catalog using a browser and select various items that are to be purchased. When the user has completed selecting the items to be purchased, the server computer system then prompts the user for information to complete the ordering of the items. This purchaser-specific order information may include the purchaser's name, the purchaser's credit card number, and a shipping address for the order. The server computer system then typically confirms the order by sending a confirming Web page to the client computer system and schedules shipment of the items.

Brief Summary Text (8):

The selection of the various items from the electronic catalogs is generally based on the "shopping cart" model. When the purchaser selects an item from the electronic catalog, the server computer system metaphorically adds that item to a shopping cart. When the purchaser is done selecting items, then all the items in the shopping cart are "checked out" (i.e., ordered) when the purchaser provides billing and

shipment information. In some models, when a purchaser selects any one item, then that item is "checked out" by automatically prompting the user for the billing and shipment information. Although the shopping cart model is very flexible and intuitive, it has a downside in that it requires many interactions by the purchaser. For example, the purchaser selects the various items from the electronic catalog, and then indicates that the selection is complete. The purchaser is then presented with an order Web page that prompts the purchaser for the purchaser-specific order information to complete the order. That Web page may be prefilled with information that was provided by the purchaser when placing another order. The information is then validated by the server computer system, and the order is completed. Such an ordering model can be problematic for a couple of reasons. If a purchaser is ordering only one item, then the overhead of confirming the various steps of the ordering process and waiting for, viewing, and updating the purchaser-specific order information can be much more than the overhead of selecting the item itself. This overhead makes the purchase of a single item cumbersome. Also, with such an ordering model, each time an order is placed sensitive information is transmitted over the Internet. Each time the sensitive information is transmitted over the Internet, it is susceptible to being intercepted and decrypted.

Detailed Description Text (2):

The present invention provides a method and system for single-action ordering of items in a client/server environment. The single-action ordering system of the present invention reduces the number of purchaser interactions needed to place an order and reduces the amount of sensitive information that is transmitted between a client system and a server system. In one embodiment, the server system assigns a unique client identifier to each client system. The server system also stores purchaser-specific order information for various potential purchasers. The purchaser-specific order information may have been collected from a previous order placed by the purchaser. The server system maps each client identifier to a purchaser that may use that client system to place an order. The server system may map the client identifiers to the purchaser who last placed an order using that client system. When a purchaser wants to place an order, the purchaser uses a client system to send the request for information describing the item to be ordered along with its client identifier. The server system determines whether the client identifier for that client system is mapped to a purchaser. If so mapped, the server system determines whether single-action ordering is enabled for that purchaser at that client system. If enabled, the server system sends the requested information (e.g., via a Web page) to the client computer system along with an indication of the single action to perform to place the order for the item. When single-action ordering is enabled, the purchaser need only perform a single action (e.g., click a mouse button) to order the item. When the purchaser performs that single action, the client system notifies the server system. The server system then completes the order by adding the purchaser-specific order information for the purchaser that is mapped to that client identifier to the item order information (e.g., product identifier and quantity). Thus, once the description of an item is displayed, the purchaser need only take a single action to place the order to purchase that item. Also, since the client identifier identifies purchaser-specific order information already stored at the server system, there is no need for such sensitive information to be transmitted via the Internet or other communications medium.

Detailed Description Text (3):

FIGS. 1A-1C illustrate single-action ordering in one embodiment of the present invention. FIG. 1A illustrates the display of a Web page describing an item that may be ordered. This example Web page was sent from the server system to the client system when the purchaser requested to review detailed information about the item. This example Web page contains a summary description section 101, a shopping cart section 102, a single-action ordering section 103, and a detailed description section 104. One skilled in the art would appreciate that these various sections can be omitted or rearranged or adapted in various ways. In general, the purchaser need only be aware of the item or items to be ordered by the single action and of the single action needed to place the order. The summary description and the detailed description sections provide information that identifies and describes the item(s) that may be ordered. The shopping cart section provides the conventional capability to add the described item to a shopping cart. The server system adds the summary description, the detailed description, and the shopping cart sections to each Web page for an item that may be ordered. The server system, however, only adds the single-action ordering section when single-action ordering is enabled for that purchaser at that client system. (One skilled in the art would appreciate that a single Web page on the server system may contain all these sections but the

single-action ordering section can be selectively included or excluded before sending the Web page to the client system.) This example single-action ordering section allows the purchaser to specify with a single click of a mouse button to order the described item. Once the purchaser clicks the mouse button, the item is ordered, unless the purchaser then takes some action to modify the order. The single-action ordering section contains a single-action ordering button 103a, purchaser identification subsection 103b, and single-action ordering information subsections 103c and 103d. The purchaser information subsection displays enough information so that the purchaser can verify that the server system correctly recognizes the purchaser. To reduce the chances of sensitive information being intercepted, the server system sends only enough information so that the purchaser is confident that the server system correctly identified the purchaser but yet not enough information to be useful to an unscrupulous interceptor. The additional information subsections allow the purchaser to obtain various settings or obtain more information related to the single-action ordering. If the purchaser wants to verify the shipping address, the purchaser can select the "check shipping address" label. In response to this selection, the server system may require the purchaser to perform a "login" so that the identity of the purchaser can be verified before the shipping information is viewed or modified. The server system then sends a Web page to the client system for display and possible modification of the shipping address. In this way, the transmitting of the sensitive shipping address can be avoided unless requested by the verified purchaser.

Detailed Description Text (4):

When the purchaser selects the single-action ordering button, the client system sends a message to the server system requesting that the displayed item be ordered. After the server system processes the message, the server system provides to the client system a new Web page that confirms receipt of the single-action order. FIG. 1B illustrates the display of a Web page confirming a single-action order. The confirming Web page contains essentially the same information as the Web page describing the item (i.e., FIG. 1A) except that an order confirmation section 105 is displayed at the top of the Web page. The order confirmation section confirms that the order has been placed and provides an opportunity for the purchaser to review and change the single-action order. Alternatively, the confirming Web page can be identical to the Web page describing the item (i.e., FIG. 1A), except that the single-action ordering button is replaced with a message confirming the order.

Detailed Description Text (5):

If a single-action ordering is not currently enabled for the client system but could be enabled, then the server system can generate a Web page like FIG. 1A, except that the single-action ordering button 103a is replaced by a single-action ordering enable button. Such a replacement button could contain text instructing the purchaser to click on the button to enable single-action ordering. When the purchaser clicks on that button, the server system would send the Web page of FIG. 1A to be displayed. Single-action ordering can be enabled whenever the server system has stored sufficient purchaser-specific order information for that client system to complete a single-action order. If the server system does not have sufficient information, then when the purchaser selects the single-action ordering button, the server system can provide a Web page to collect the additional information that is needed. The server system may require the purchaser to "login" so that the identity of the purchaser can be verified before the single-action ordering is enabled.

Detailed Description Text (10):

FIG. 4 is a flow diagram of a routine to generate a Web page in which single-action ordering is enabled. When single-action ordering is enabled, the server system generates a Web page describing an item as is conventionally done and then adds a single-action ordering section. In one embodiment, the server system adds partial purchaser-specific order information to the section. This information may include the customer's name, a shipping address moniker selected by the purchaser (e.g., "at home"), and the last five digits of a credit card number or a nickname selected by the purchaser. Such partial information should be the minimum information sufficient to indicate to the purchaser whether or not the server system is using the correct purchaser-specific order information. In step 401, the server system generates a standard shopping cart-type Web page for the item. In step 402, if the single-action ordering flag has been set for the client identifier and customer combination, then the server system continues at step 403, else the server system completes. In step 403, the server system adds the single-action section to the Web page and completes.

Detailed Description Text (18):

Although the present invention has been described in terms of various embodiments, it is not intended that the invention be limited to these embodiments. Modification within the spirit of the invention will be apparent to those skilled in the art. For example, the server system can map a client identifier to multiple customers who have recently used the client system. The server system can then allow the user to identify themselves by selecting one of the mappings based preferably on a display of partial purchaser-specific order information. Also, various different single actions can be used to effect the placement of an order. For example, a voice command may be spoken by the purchaser, a key may be depressed by the purchaser, a button on a television remote control device may be depressed by the purchaser, or selection using any pointing device may be effected by the purchaser. Although a single action may be preceded by multiple physical movements of the purchaser (e.g., moving a mouse so that a mouse pointer is over a button), the single action generally refers to a single event received by a client system that indicates to place the order. Finally, the purchaser can be alternately identified by a unique customer identifier that is provided by the customer when the customer initiates access to the server system and sent to the server system with each message. This customer identifier could be also stored persistently on the client system so that the purchaser does not need to re-enter their customer identifier each time access is initiated. The scope of the present invention is defined by the claims that follow.

Current US Original Classification (1):

705/26

Current US Cross Reference Classification (2):

705/27

US Reference Patentee Name (9):

Bezos

US Reference Patentee Name (10):

Bezos

US Reference Group (9):

5715399 19980200 Bezos 705/27

US Reference Group (10):

5727163 19980300 Bezos 705/27

End of Result Set



Generate Collection

Print

L27: Entry 1 of 1

File: USPT

Oct 16, 2001

DOCUMENT-IDENTIFIER: US 6304864 B1

TITLE: System for retrieving multimedia information from the internet using multiple evolving intelligent agents

US Patent No. (1):
6304864

Detailed Description Text (35):

The database may maintain a log of the events occurring during a search of an agent leader. The log may record, for example, each of the query expansions at step 54 and the state of the query after each evolution. The user may click on the show log button 62i of the GUI 21 of FIG. 3A to instruct the agent server 22 to display the contents of the log from database 27 through the GUI.

End of Result Set



Generate Collection

Print

L27: Entry 1 of 1

File: USPT

Oct 16, 2001

US-PAT-NO: 6304864

DOCUMENT-IDENTIFIER: US 6304864 B1

TITLE: System for retrieving multimedia information from the internet using multiple evolving intelligent agents

DATE-ISSUED: October 16, 2001

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Liddy; Elizabeth D.	Syracuse	NY		
Yu; Edmund Szu-Li	Dewitt	NY		

ASSIGNEE-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY	TYPE CODE
Textwise LLC	Syracuse	NY			02

APPL-NO: 09/ 295190 [PALM]

DATE FILED: April 20, 1999

INT-CL: [07] G06 F 9/445

US-CL-ISSUED: 706/15

US-CL-CURRENT: 706/15

FIELD-OF-SEARCH: 707/4, 706/20, 706/25

PRIOR-ART-DISCLOSED:

U.S. PATENT DOCUMENTS

Search Selected

Search ALL

	PAT-NO	ISSUE-DATE	PATENTEE-NAME	US-CL
<input type="checkbox"/>	5086479	February 1992	Takenaga et al.	
<input type="checkbox"/>	5140530	August 1992	Guha et al.	
<input type="checkbox"/>	5245696	September 1993	Stork et al.	
<input type="checkbox"/>	5295227	March 1994	Yokono	
<input type="checkbox"/>	5398300	March 1995	Levey	
<input type="checkbox"/>	5586218	December 1996	Allen	
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<input type="checkbox"/>	5701451	December 1997	Rogers et al.	
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ABSTRACT:

A system for retrieving multimedia information is provided using a computer coupled to a computer-based network, such as the Internet, and particularly the World Wide Web (WWW). The system includes a web browser, a graphic user interface enabled through the web browser to allow a user to input a query representing the information the user wishes to retrieve, and an agent server for producing, training, and evolving first agents and second agents. Each of the first agents retrieves documents (Web page) from the network at a different first network address and at other addresses linked from the document at the first network address. Each of the second agents executes a search on different search engines on the network in accordance with the query to retrieve documents at network addresses provided by the search engine. The system includes a natural language processor which determines the subject categories and important terms of the query, and of the text of each agent retrieved document. The agent server generates and trains an artificial neural network in accordance with the natural language processed query, and embeds the trained artificial neural network in each of the first and second agents. During the search, the first and second agents process through their artificial neural network the subject categories and important terms of each document they retrieve to determine a retrieval value for the document. The graphic user interface displays to the user the addresses of the retrieved documents which are above a threshold retrieval value. The user manually, or the agent server automatically, selects which of the retrieved documents are relevant. Periodically, the artificial neural network of the first and second agents is expanded and retrained by the agent server in accordance with the selected relevant documents to improve their ability to retrieve documents which may be relevant to the query. Further, the agent server can evolve an artificial neural network based on the current artificial neural network, the retrieved documents, and their selected relevancy, by iteratively producing, training, and testing several generations of neural networks to produce an evolved agent. The artificial neural network of the evolved agent then replaces the current artificial neural network used by the agents to search the Internet. One or more concurrent search of the Internet may be provided.

24 Claims, 8 Drawing figures